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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL ADJUSTMENT ADMINISTRATION
WESTERN DIVISION

ARIZONA HANDBOOK

1940 AGRICULTURAL CONSERVATION PROGRAM

PURPOSES OF THE PROGRAM

1. To protect and restore the soil resources of the Nation by assisting farmers to plant soil-building crops and carry out soil-building and range-building practices.
2. To raise farm income by bringing supplies of major crops in line with demand and by offering payments to farmers for cooperating in bringing about better conditions for agriculture.
3. To stabilize and maintain adequate food supplies for consumers.

PART I—1940 AGRICULTURAL CONSERVATION PROGRAM

HOW THE PROGRAM WORKS

Payments may be earned by planting within farm acreage allotments and by carrying out soil-building and soil-conserving practices.

Individual farm allotments and normal yields are determined by the county committee in cooperation with community committees for cotton and wheat in all counties in which these crops are grown and commercial-vegetable allotments are determined in Maricopa, Pinal and Yuma Counties.

COTTON

A cotton acreage allotment is determined for each farm on which cotton has been planted in at least 1 year since 1936, and a small reserve is available for determining allotments for farms on which cotton will be produced in 1940 for the first time since 1936. The allotments for all farms within a county are based upon a fixed percentage of each farm's tilled acreage (limited, in irrigation areas, to the acreage for which an adequate supply of water has been developed for the normal production of cotton), excluding the normal wheat acreage. There are special provisions relating to minimum allotments and adjustments in the case of small farms.

Payment will be computed at the rate of 1.6 cents per pound times the normal yield for each acre in the cotton allotment. If the acreage planted to cotton is in excess of the allotment, a deduction will be made at the rate of 4.0 cents per pound times the farm's normal yield for each acre in excess of the allotment, unless it is determined that the farm was knowingly overplanted, in which case

no payment may be made under the program. The approximate amount of the cotton payment will be shown on Form WR-406B.

Acreage planted to cotton means the acreage of land seeded to cotton the staple of which is normally less than $1\frac{1}{2}$ inches and which reaches the stage of growth at which bolls are first formed.

WHEAT

A wheat acreage allotment and normal yield are determined by the county committee in cooperation with community committees for each farm on which wheat is grown.

Payment and deduction on wheat-allotment farms.—Payment will be computed at the rate of 9 cents per bushel times the normal yield of wheat for the farm for each acre in the wheat acreage allotment. The approximate amount of the wheat payment will be shown on WR-406B.

A deduction will be made on a wheat-allotment farm at the rate of 50 cents per bushel times the normal yield for each acre planted to wheat in excess of the farm's wheat acreage allotment.

Nonwheat-allotment farm.—A farm may be considered to be a nonwheat-allotment farm if the persons having an interest in the wheat so elect. A farm for which a wheat acreage allotment was not determined is also considered to be a nonwheat-allotment farm. No wheat payment will be made on a nonwheat-allotment farm.

On a nonwheat-allotment farm the deduction will be 50 cents per bushel times the normal yield for each acre of wheat harvested for grain or for any other purpose after reaching maturity in excess of the usual acreage of wheat determined by the county committee for the farm or 10 acres, whichever is the larger.

Acreage planted to wheat means (1) any acreage of land devoted to seeded wheat and (2) any acreage of land devoted to volunteer wheat which remains on the land until May 1, 1940.

COMMERCIAL VEGETABLES

In Maricopa, Pinal, and Yuma Counties, a commercial-vegetable acreage allotment shall be determined for each farm on which the average acreage of land normally planted to commercial vegetables is 3 acres or more.

Payment will be computed at the rate of \$1.50 for each acre in the commercial-vegetable acreage allotment determined for the farm. The approximate commercial-vegetable payment will be shown on WR-406B. If a producer plants less than 80 percent of the commercial-vegetable allotment, the allotment and consequently the payment will be reduced.

A deduction at the rate of \$20 per acre will be made for each acre of land planted to commercial vegetables in excess of the larger of the commercial-vegetable acreage allotment, or 3 acres.

Commercial vegetables means the acreage of annual vegetables or truck crops (including potatoes, sweetpotatoes other than for starch, tomatoes, sweet corn, cantaloupes, annual strawberries, commercial bulbs and flowers, but excluding peas for canning or freezing and sweet corn for canning) of which the larger portion of the production is sold to persons not living on the farm.

TOTAL SOIL-DEPLETING ALLOTMENT

A total soil-depleting allotment shall be determined for each farm for which a cotton or wheat acreage allotment is determined.

Deductions for excess soil-depleting acreage.—On farms for which a total soil-depleting allotment is determined a deduction will be made of \$5 for each acre classified as soil-depleting in excess of the larger of (1) the total soil-depleting acreage allotment determined for the farm, plus the acres of cotton, wheat and commercial vegetables with respect to which deductions are made, or (2) 20 acres plus the acreage planted to cotton.

SOIL-BUILDING ALLOWANCE

The maximum amount that may be earned on a farm by carrying out soil-building practices is the sum of the following items:

1. \$2 per acre of commercial orchards (excluding nonbearing orchards and vineyards) and perennial vegetables on the farm January 1, 1940.
2. 5 cents per acre of noncrop, open, pasture land, provided that the amount computed under this item shall not be less than 10 cents times the number of such acres or 640 acres, whichever is smaller.
3. 70 cents per acre of cropland in excess of the sum of (1) the cotton and wheat acreage allotments with respect to which payment is computed, and (2) the acreage of sugar beets planted for harvest in 1940 for the extraction of sugar.

For any farm with respect to which the sum of the payments computed for cotton, wheat, commercial vegetables, and under items 1, 2, and 3 above is less than \$20, the soil-building allowance shall be increased by the amount of the difference. In addition, a payment will be computed at the rate of \$7.50 per acre for planting forest trees, but not to exceed a total of \$30 per farm.

SOIL-BUILDING PRACTICES

In determining the acceptability of the methods used in carrying out soil-building practices, the farmer should be guided by the specifications contained herein and any additional specifications issued by the State committee or by the county committee with the approval of the State committee, as are needed in the interest of soil conservation. This applies particularly to rates, dates, and methods of seeding, cultural practices, adaptability of soil-conserving crops, trees and shrubs, methods of weed control, etc., used in connection with soil-building practices.

The farmer must make sure that the seed used is adapted to the community, free from noxious weed and relatively free from other weed seed, and is seeded in sufficient quantity to meet the minimum seeding requirements in good viable seed. The farmer will be required to cooperate with governmental insect-control agencies in the area where the farm is located, whenever an organized insect-control campaign is operated in the area.

The approximate maximum amount that may be earned, by use of the soil-building practices in this handbook, on any farm in Arizona, is the amount shown on the farm plan and estimate sheet, WR-406B. If all or part of the labor, seed, or materials is furnished by any governmental agency, no credit or only partial credit will be given

for the practice. The county committee will furnish further detailed information.

The farmer should plan his operations for the year, considering the very best farm plan for that farm, and then determine whether or not his planned soil-building practices for the year will bring about the greatest possible amount of soil conservation.

Any combination of soil-building practices on the same land may be allowed by the county committee subject to the approval of the State committee.

The 1940 crop-year for carrying out the soil-building practices will be from January 1, 1940, through December 31, 1940.

Application of Materials

Practice (1) (i)—Application of phosphate.—\$1.50 for each 300 pounds of 16 percent superphosphate or its equivalent of 48 pounds of available P_2O_5 in other forms of fertilizer (107 pounds of treble superphosphate, 45 percent phosphate), (100 pounds of ammonium phosphate 11-48), (240 pounds of ammonium phosphate 16-20), applied to or in connection with the seeding of any of the perennial or biennial legumes, or perennial grasses, or annual rye grasses, or green manure crops in orchards in all counties of the State. Rock phosphate and basic slag will not qualify. No credit will be given when fertilizers are used in connection with soil-depleting crops. Operators should save tags or purchase slips as supporting evidence of performance.

Practice (2)—Gypsum.—\$1.50 for each 500 pounds of gypsum containing not less than 18 percent sulphur (or its sulphur equivalent) when applied as a soil amendment. The operator will be required to furnish evidence of the amount of gypsum and its sulphur content. Purchase slips or tags will be acceptable evidence.

Practice (4)—Mulching.—\$1.50 for each 2 tons, air dry weight, of straw or equivalent mulching material (other than barnyard and stable manure), applied to orchards or on commercial-vegetable land.

Seedings

Practice (6)—Alfalfa.—\$1.50 per acre for each acre seeded to alfalfa on cropland or in orchards.

Practice (7)—Permanent grasses and permanent pastures.—\$3 for each acre of pasture seeded to a full seeding of the following grasses: Rothrock grama, sprucetop grama, side-oats grama, hairy grama, blue grama, black grama, crested wheat, cotton grass, curly mesquite, tobosa, galleta.

Practice (8)—Annual ryegrass, annual sweetclover, biennial legumes, perennial legumes, perennial grasses, or mixtures.—75 cents per acre for each acre seeded to annual ryegrass, annual sweetclover, biennial legumes, perennial legumes, perennial grasses (other than timothy or redtop), or mixtures (other than a mixture consisting solely of timothy and redtop) containing biennial legumes, perennial legumes, or perennial grasses (except any of such crops qualifying at higher rate of credit under any other practice.)

Practice (9)—Winter legumes.—\$1.50 for each acre seeded in the fall or winter to winter legumes.

Practice (10)—Establishment of a permanent vegetative cover by planting sod pieces.—\$4.50 per acre for Bermuda grass planted between April 15 and August 15 to restore irrigated pasture. Sod pieces shall not be less than 6 inches square and 4 inches thick and planted not more than 6 feet apart. The planting shall be irrigated immediately and often enough thereafter to secure a stand.

Practice (12)—Timothy or redtop.—37½ cents per acre for each acre seeded to timothy or redtop or a mixture consisting solely of timothy and redtop.

Pasture Improvement

Practice (13)—Reseeding depleted pastures.—\$1.50 for each 10 pounds of seed used in reseeding depleted pastures with good seed of adapted pasture grasses or legumes.

Practice (14)—Natural reseeding by nongrazing.—\$1.50 for each 25 acres of noncrop, open pasture withheld from grazing for the period June 15 to October 15. The operator must submit to the county committee in writing the designation of the area to be withheld from grazing previous to the initiation of such practice. The operator must carry out supplemental practices established by the county committee with the approval of the State committee. These supplemental practices require the expenditure of the amount earned under this practice to be used in the development of soil conservation practices for which payment is not otherwise made.

Practice (16)—Construction of reservoirs and dams.—\$1.50 for each 10 cubic yards of material moved in making the fill or excavation, or 7 cubic feet of concrete or rubble masonry. All structures shall be for the purpose of conserving moisture or retarding soil erosion or to supply water for livestock. All construction shall be of a permanent nature. Earthen tanks or reservoirs shall be constructed according to the specifications outlined under practice (g) of the 1940 Range Program. Concrete or rubble masonry structures shall be constructed in accordance with specifications under practice (h) of the 1940 Range Program.

Green-Manure and Cover Crops

Practice (17)—Green manure and cover crops.—1. \$1.50 for each acre of annual legumes (except lespedeza) of which a good growth and good stand is turned under as green manure on cropland or orchard land.

2. \$1.50 for each acre of small grains (excluding wheat), Sudan grass, mustard, or giant amaranthus, of which a good stand and good growth is turned under as green manure on orchard land, commercial-vegetable, or potato land.

3. \$1.50 for each 2 acres of the crops listed in 2 above of which a good stand and good growth is turned under as green manure on cropland other than commercial-vegetable or potato land.

4. \$1.50 for each acre of the crops listed in 1 and 2 above of which a good growth and good stand is left on orchard land as a cover crop which is not harvested for seed, grain, hay, or pasture.

Any crop for which credit is given in 1940 under any other practice or any crop from which seed is harvested by mechanical means shall not be eligible for credit under this practice. Green manure crops turned under on land subject to erosion must be followed by a winter cover crop.

Erosion Control Practices

Practice (19)—Contour ridging or terracing of noncrop pasture land.—\$1.50 for each 750 linear feet of ridges or terraces constructed on the contour on noncrop pasture land. Contours should be staked out by a competent engineer. Contour ridges shall be not less than 18 inches in height and shall have minimum side slopes of 2 to 1. The crown shall not be less than 1 foot wide. If the ridges are given a grade, the fall shall not exceed 4 inches per 100 feet of length. Sufficient openings should be made through the ridges according to topographical features to allow for uniform spreading of diverted water. The openings shall be protected by masonry, rock riprap, or sodding. No payment shall be made for performance of this practice unless the diverted water is distributed over the affected area and its return to the flood channel is retarded sufficiently to prevent erosion.

Practice (20)—Standard terraces.—\$1.50 for each 200 linear feet of standard terrace for which proper outlets are provided. Plans for establishing terraces must have the prior approval of the county committee. They must be constructed so as to control soil erosion and conserve moisture of the area involved. The work should be supervised by a competent engineer. Terraces should be from 15 to 20 feet wide and 18 inches high when settled, with sufficient grade to carry to the outlet. The length of the terrace should not exceed 1,500 feet. Each terrace must have an outlet of such character as to prevent erosion at the outlet.

Practice (21)—Concrete or rubble masonry check dams or drops and measuring weirs.—\$1.50 for each 7 cubic feet of concrete or rubble masonry to reduce to nonerosive velocity the flow of the normal head of irrigation water. The side walls, cut-off walls, and wing walls shall not be less than 4 inches in thickness and meet the standard specifications as found in the Farmers' Bulletin No. 1772, entitled "The Use of Concrete on the Farm."

Practice (22)—Spreading of flood water and well water.—\$1.50 for each 300 linear feet of ditching. Ditches of less than 300 feet will not qualify. The ditch must be large enough to carry the diversion water and in no case less than a cross-section measurement of 4 square feet and must have an adequate outlet. If openings are made along the ditch these must be protected against erosion by either natural sod, riprap, or spreaders that will prevent erosion. This practice is not applicable to orchard land.

Practice (23)—Riprapping active streams.—\$1.50 for each cubic yard of rock riprap constructed along active streams for the control of erosion of farm land. Prior approval of the county committee must be secured before construction is started. Detailed specifications will be furnished to each cooperator whose project is approved.

Practice (26)—Contour listing, furrowing, or subsoiling noncrop pasture land.—\$1.50 for each 4 acres. The acreage of this practice shall be computed on the basis of the area so handled, each furrow or strip being considered to occupy an area not in excess of $\frac{1}{2}$ rod in width. Lists or furrows shall be constructed on the contour with lists or furrows spaced not more than 25 feet apart horizontally or 1 foot vertically, and having a minimum cross-section area of not less than 32 square inches. Dams or furrow breaks at intervals of not more than 100 feet shall be provided to check the free movement of water along the furrow and to assure more uniform moisture distribution.

Subsoiling, which includes chiseling, scarifying, or ripping, will be permitted for the purpose of checking run-off, increasing penetration, and to promote reseeding, with not less than four contours every 50 feet which loosen the soil to a depth of not less than 12 inches. Credit will not be given for the practice on an acreage for which payment has been made for a similar practice under a previous program.

Practice (32)—Contour farming intertilled crops on nonirrigated cropland.—\$1.50 for each 8 acres. This practice is applicable only on land having a slope in excess of 1 percent.

The operations of preparing the seedbed, of seeding or planting, and of cultivating the crop must be performed parallel to a contour line. No line of operation should deviate in slope more than 1 percent from a true contour line.

Contour farming should not be approved on gully land unless the gullies are adequately protected by close growing vegetation, adequate check dams, terracing, or other means of gully control.

At least 95 percent of the area must meet the foregoing specifications with respect to contour lines at the time performance is checked.

Practice (33)—Contour listing (except when carried out on protected summer-fallowed acreage or as a part of a seeding operation).—\$1.50 for each 6 acres. This practice is applicable on nonirrigated cropland having slopes in excess of one-half percent.

Contour listing of land on which gullies have formed shall not be approved unless the area occupied by the gullies is adequately protected.

Forestry

Practice (40)—Planting forest trees.—\$7.50 per acre for planting forest trees, including shrubs beneficial to wild life or in protective plantings. Such trees must be protected from fire and grazing and cultivated in accordance with good tree culture or wild life management practice.

Other Practices

Practice (43)—Weed control.—\$7.50 for each acre of perennial noxious weeds which are controlled on cropland, orchard land, or noncrop pasture land in organized weed-control areas, in accordance with approved methods. An organized weed-control area is one wherein designated officials are authorized to

require effective weed-control practices to be carried out on all land on which such practices are necessary, or any other organized area comprising all or part of a county wherein the State committee determines that effective weed-control practices will be instituted on all land on which such practices are necessary.

It is necessary to get the approval of the State committee before March 15 on the areas included. Farm operators must secure approval of the county committee prior to April 15 of areas to be treated.

The noxious weeds to be controlled in Arizona are: nutgrass, bindweed, camel's thorn, perennial ragweed, Russian knapweed, Johnson grass and silver nightshade.

Practice (46)—Renovation of perennial legumes.—75 cents for each acre of perennial legumes which are renovated. Before this practice is started, the operator must notify the county committee. When the renovation is to restore old or deteriorated stands, the cultivation must be done during the dormant season and to a depth sufficient to destroy weeds. Thin stands must be reseeded by reseeding in the fall. Irrigation must not follow until the weeds have died. When the renovation is to restore alfalfa stands stunted by poor drainage, the soil must be broken by subsoiling or chiseling at intervals of not more than 10 feet.

Practice (47)—Subsoiling.—37½ cents per acre for each acre of cropland or orchard land which is subsoiled to a minimum depth of 18 inches. Each furrow will be considered to occupy an area not in excess of ½ rod in width.

SOIL-DEPLETING ACREAGE

Any acreage of land devoted during the 1940 crop year to one or more of the following crops or uses will be considered as soil-depleting acreage:

Corn planted for any purpose except sweet corn or popcorn grown in a home garden for use on the farm;

Cotton which reaches the stage of growth at which bolls are first formed;

Grain sorghums, sugar beets, mangels or cowbeets planted for any purpose;

Potatoes or annual truck and vegetable crops planted for any purpose except when grown in a home garden for use on the farm;

Commercial bulbs and flowers, commercial mustard, cultivated sunflowers, safflower, or hemp harvested for any purpose;

Field beans planted for any purpose or peas planted for canning, freezing, or dried peas, except when grown in a home garden for use on the farm or when incorporated into the soil as green manure;

Flax planted for any purpose except when used as a nurse crop for biennial or perennial legumes or perennial grasses which are seeded in a workmanlike manner or in the counties of Maricopa, Pima, Pinal and Yuma when matched acre for acre by biennial or perennial legumes or perennial grasses seeded alone in a workmanlike manner;

Wheat planted or regarded as planted for any purpose on a wheat-allotment farm;

Wheat on a non-wheat-allotment farm harvested for any purpose after reaching maturity;

Oats, barley, rye, emmer, speltz, or mixtures of these crops harvested for grain;

Wheat on a non-wheat-allotment farm, oats, barley, rye, emmer, speltz, or mixtures of these crops harvested for hay, except when such crops are used as nurse crops for legumes or perennial grasses which are seeded in a workmanlike manner and the nurse crop is

cut green for hay or when such crops are grown in a mixture containing at least 25 percent by weight of winter legumes;

Buckwheat, Sudan grass, or millet harvested for grain or seed;

Sweet sorghums harvested for grain, seed, or sirup;

Land summer-fallowed, if such acreage is not protected from wind and water erosion by maintenance of a rough and cloddy surface or by tillage operations and soil management practices commonly regarded in the locality as effective in preventing erosion.

PAYMENT PROVISIONS

Division of special-crop and total soil-depleting allotment payments.—In general, the crop-allotment payments and deductions will be divided between landlords, tenants, and sharecroppers as the crop is divided.

In cases where two or more separately owned tracts of land comprise a farm, the share of each person in the payment or deduction will be that indicated on ACP-95 if all interested persons agree.

Division of soil-building payments.—The payments earned in connection with soil-building practices will be paid to the landlord, tenant, or sharecropper who carried out the soil-building practices.

Deductions on other farms.—If a person complies on one farm and has an interest in another farm which is not in compliance to the extent that deductions exceed the payments, the payments due him on the farm in compliance will be reduced by his share of the deductions carried over from the other farm.

Increase in small payments.—If the total payment computed for any person is less than \$200 the payment will be increased by an amount fixed in the law. Information as to the exact amount of the increase can be obtained from the county committee.

Payments limited to \$10,000.—Combined range and agricultural conservation payments to an individual, partnership, or estate, are limited by the law to \$10,000 in a State; a corporation or association is, by the law, limited to \$10,000 in the United States.

Deduction for association expenses.—The estimated administrative expenses of the county agricultural conservation association shall be deducted pro rata from the payments computed for all of the farms and ranches in the county.

Defeating purposes of program.—Congress has authorized payments only to persons whose cooperation results in net contributions to the program. Accordingly, payment will be withheld from any person who adopts any practice which tends to defeat or offset the purposes of the program.

Idle farms.—The only payments which will be made with respect to farms which are not operated in 1940 are payments for carrying out soil-building practices.

Payment made or computed without regard to claims.—Any payment or share of payment will be made without regard to questions of title under State law and without regard to any claim or lien against any crop or proceeds thereof in favor of the owner or

any other creditor, except as stated in the paragraph on assignments and indebtedness due the United States which is subject to set-off.

Availability of funds.—All payments provided for in this handbook are subject to the limits determined by appropriations which Congress may provide. As an adjustment for participation the rates of payment and deduction with respect to any commodity or item of payment may be increased or decreased by as much as 10 percent.

APPLICATION PROVISIONS

Eligibility.—An application for payment may be made by any person for whom a share in the payment with respect to a farm may be computed and who, at the time of harvest, is the owner-operator or who is entitled to share in any of the crops grown on the farm under a lease or operating agreement, or who participates in carrying out approved soil-building practices on the farm.

Time of filing application.—Payments will be made only upon applications submitted through the county office on or before March 31, 1941, and only to those persons who furnish required information and file prescribed forms within the respective time limits therefor.

Application for other farms in county.—A person must make application for payment with respect to all farms in the county which he operates or rents to other persons.

MISCELLANEOUS PROVISIONS

Assignments.—Any person who may be entitled to a payment in connection with the 1940 program may assign his interest in such payment as security for cash loaned or advances made for the purpose of financing the making of a crop in 1940 or for money or materials advanced or labor performed in carrying out range-building practices. No assignment will be recognized unless the assignment is made on ACP-69 in accordance with instructions contained in ACP-70.

Appeals.—Any person has 15 days following his notice of any action of the county committee to file a written appeal asking for reconsideration. Any person having appealed to the county committee who is still dissatisfied may, within 15 days following his notice of the reconsideration, appeal to the State committee, whose action is reviewable by the Regional Director.

Applicability.—The provisions of the 1940 program are not applicable to public domain, including land owned by the United States and administered under the Taylor Grazing Act or by the Forest Service of the United States Department of Agriculture, and other lands in which the beneficial ownership is in the United States.

ADDITIONAL INFORMATION

Complete information may be obtained from the county office of the agricultural conservation association regarding allotments, payments, appeals, soil-building practices, and other details of the program.

PART II—1940 RANGE CONSERVATION PROGRAM

HOW THE PROGRAM WORKS

Payments may be earned by carrying out range-building practices, listed below, from January 1, 1940, through December 31, 1940, which are approved by the county committee for the ranching unit prior to their institution. Detailed specifications will be given to the operator for those practices which he selects for which further detailed specifications are necessary. The amount of payment which may be earned cannot exceed the range-building allowance.

RANGE-BUILDING PRACTICES

Reseeding of Range Land

Practice (a)—Natural reseeding by deferred grazing.—75 percent of the range-building allowance may be earned by withholding 25 percent of the range land from grazing from the start of forage growth to seed maturity (such period to be of not less than 90 consecutive days announced by the county committee for their respective counties not later than 15 days prior to the beginning of such period) and by performing supplemental practices prescribed by the county committee for which payment otherwise will not be made. If less than 25 percent of the range land in the ranching unit is deferred, a proportionate payment may be made. In any event, the payment for deferred grazing shall not exceed the value of supplemental practices performed which are designated by the county committee in accordance with instructions. On ranching units on which cattle or horses are grazed, the area to be kept free of grazing must be fenced and the fence maintained sufficiently to prevent the entry of livestock. On ranching units used exclusively for grazing sheep or goats, the entry of livestock on the nongrazing acreage must be prevented by herding or by other specified methods. The remaining range land on the ranching unit must not be pastured to such an extent as will decrease the stand of grass or injure the forage, tree growth, or watershed. The practice of deferred grazing shall not be applicable on range land which normally is not used for grazing. The ranch operator must file Form WR-415 with the county committee, designating the area to be deferred previous to the initiation of the practice.

Practice (b)—Artificial reseeding.—20 cents per pound of seed sown, but not in excess of \$2 per acre, for reseeding depleted range land, with good seed of adapted varieties of range grasses, legumes, or forage shrubs.

This practice can be recommended and approved by a county committee only after full consideration has been given to the climatic conditions of a locality and the type of soil upon which the seed is to be sown. The county committee shall use all available information of local agricultural agencies, and other sources, in determining the best adapted varieties or mixtures thereof to sow.

High quality seed must be used. New seeding must be adequately protected. Detailed information regarding dates, rates, method of seeding, approved varieties and approved methods of protection shall be obtained from the county committee at the time of approval of the practice.

The operator must indicate the source of the seed and present conclusive evidence of the amount and kind of grass seed, legumes, or forage shrubs used in performing this practice.

Erosion and Run-off Control

All soil erosion and water conservation measures developed for payment shall be solely for the purpose of conserving moisture and retarding soil erosion on range land in order to facilitate the renovation and maintenance of adequate vegetative cover. The use of mechanical water conservation measures shall be limited to soil types that are pervious enough to satisfactorily utilize the additional mois-

ture retained from the application of these measures and to the flatter slopes or locations where the diversion can be attained without undue expense.

All structures shall be staked out by a competent person prior to institution.

Payment for contouring of loose sandy soil or land with a slope in excess of 8 percent shall not be made.

Practice (d)—Contour listing, furrowing, or subsoiling.—2½ cents per 100 linear feet for listing, furrowing, or subsoiling range land on the contour.

Specifications for this practice are identical with practice (26) of part I of this handbook.

Practice (f) (1)—Spreader dams.—15 cents per cubic yard of material moved in constructing spreader dams on intermittent streams.

Dams in excess of 4 feet in height shall be built to the same standards as are applicable for practice (g), Earthen tanks or reservoirs. In addition, they may be supplemented with smaller diversion dams or dikes extending from either one or both ends of the dam, if necessitated by existing topography, in order to prevent diverted water from "tailing" back. The dikes shall be of sufficient length and height to allow for uniform spreading of the water. Detailed specifications will be given to the operator at time prior approval is given.

Under no circumstances shall payment be made for performance of this practice unless the diverted water is distributed over the area affected and its return to the flood channel is retarded sufficiently to prevent further erosion.

Practice (f) (2)—Spreader terraces.—50 cents per 100 linear feet for constructing spreader terraces. Spreader terraces or diversion ditches for any purpose other than spreading of flood water will not qualify for payment. Ditches may be used to carry diverted water from a diversion point to the area over which the water is to be spread. Detailed specifications will be given to the operator when prior approval is given.

Development of Stock Water on Range Land

Any practice under water development performed for payment shall supply ample water for the number of livestock using the adjoining range during its period of grazing and shall be solely to bring about such a distribution of livestock on the range as will conserve and restore the vegetative cover thereof, but shall not be used to impound water for irrigating purposes. All construction shall be of a permanent nature and in accordance with approved specifications. Existing dams may be enlarged if the project has prior approval of the State committee based on the recommendation of the county committee. This recommendation must show that the dam is properly located, that its enlargement is necessary to make permanent water available, and must show the yardage in place as well as the yardage in the proposed enlargement.

Any new water development must be a reasonable distance from any other watering place in order that it will not serve the same range land.

Practice (g)—Earthen tanks or reservoirs.—15 cents per cubic yard of material moved not in excess of 5,000 cubic yards, and 10 cents per cubic yard of material moved in excess of 5,000 cubic yards for each tank or reservoir, for constructing reservoirs or earthen tanks with spillways adequate to prevent dams from washing out, for the purpose of providing water for range livestock.

This practice shall not be approved on live streams. It shall be performed for the purpose of providing water to livestock using the adjoining range land but shall not be for the purpose of irrigation. Structures shall be located on watersheds of sufficient size whereby an ample supply of water will be concentrated and made available to livestock during the period of grazing use. Payment will not be made for building dams over 10 feet in height, unless the construction and the specifications therefor are approved by the State committee prior to institution. Earthen tanks located where heavy silting will fill them within a short time shall not be approved. Reservoir construction will not be approved in light sandy soils. The earthen dams for impounding water shall be located to take advantage of natural spillway facilities, minimum fill requirements, impervious reservoir foundation, range water distribution, reservoir capacity, and protection from wave action.

Spillways shall be protected by brush mats, wood, stone, or concrete if not sodded or heavily grassed; except in heavy types of soil the spillway may, upon specific approval of the county committee, be protected by a series of concrete or rubble masonry check dams built according to specifications issued by the State committee.

The depth of the reservoir shall be not less than 7 feet below the bottom of the spillway. The minimum height of the dam above the bottom of the spillway shall be 3 feet. The minimum cross-section of the spillway shall be 45 square feet or equal to the cross-sectional area of the entranceway at flood stage, whichever is larger.

Dam dimensions shall meet the following specifications: The top width shall be a minimum of 6 feet. Minimum slopes for reservoirs shall be 3 to 1 on the upstream face and 2 to 1 on the downstream face. Fencing of dams or spillways will not be required unless recommended by the county committee.

Where the construction of a dam is not necessary to impound water and the topography of the land makes it possible to concentrate water in a pit or earthen tank for livestock, specifications for a dam and spillway are not applicable and payment will be made for excavating a pit or earthen tank, provided the excavation is made in a natural basin or in a relatively flat, wide drainage area. Such pit or tank shall have a depth of not less than 7 feet from the bottom to the ground level at outlet, unless rock or gravel is encountered, in which case it shall be not less than 5 feet in depth. Minimum bottom area shall be not less than 100 square feet.

Where an off-channel reservoir site or a natural storage basin is available but the drainage area does not produce adequate run-off to provide permanent stock water, a diversion channel from another drainage shall qualify for payment under this practice, provided such channel is constructed on a non-erosive grade and there is no possibility of its use for irrigation. Payment shall be made for excavated cross-section not in excess of 3 square feet.

Practice (h)—Concrete or rubble masonry dams.—\$6 per cubic yard for constructing concrete or rubble masonry dams in rough or broken areas (where earthen dams or reservoirs are impracticable and where there is no possibility of using the dam for irrigation), for the purpose of providing water for range livestock.

The dams shall be located on a firm foundation that will insure stable support for the structures. Concrete used must be made in accordance with standard recommendations set forth in Farmers' Bulletin No. 1772, "Use of Concrete on the Farm" published by the United States Department of Agriculture, Washington, D. C. All proposed dams must be constructed at sites and in accordance with specifications approved in writing by the State committee prior to institution.

Practice (i) (1)—Wells.—\$2 per linear foot for drilling or digging wells with casing not less than 4 inches in diameter, for the purpose of providing water for range livestock, provided a windmill or power pump is installed and the water is conveyed to a tank or storage reservoir. Payment will not be made for a well developed at any ranch headquarters.

A dry hole shall not qualify. A mechanical lifting device other than a hand pump shall be installed and in operation at the time of inspection. An existing well may be deepened to provide an additional supply of water adequate for the number of livestock on the adjacent range; but under no circumstances shall such performance be approved before measurements showing the depth of the existing well have been made and recorded with the county committee.

No payment will be made for a tank or storage reservoir constructed in connection with this practice. An artesian well shall not qualify under this practice.

Practice (i) (2)—Wells.—\$1 per linear foot for drilling or digging wells with casing less than 4 inches in diameter, for the purpose of providing water for range livestock, provided a windmill or power pump is installed and the water is conveyed to a tank or storage reservoir. An artesian well with casing less than 4 inches in diameter will qualify for payment, provided adequate stock water is made available during the grazing season and the water is conveyed to a tank or trough. Payment will not be made for a well developed at any ranch headquarters.

The same specifications for a well with 4-inch casing will apply with the exception that no payment will be made for a well other than an artesian well

under this practice if casing less than 2 inches is installed. An artesian well with casing less than 4 inches and equipped with a cut-off device, when constructed according to specifications, will be approved, but a mechanical lifting device will not be required. No payment will be made for a tank or storage reservoir constructed in connection with this practice.

Development of Natural Watering Places

For developing springs or seeps for the purpose of providing water for range livestock, provided the source is protected from trampling, and at least 20 cubic feet of available water storage is provided. This practice will not be approved for payment unless the total cost of the development amounts to at least \$20.

Practice (j) (1)—Excavation in soil or gravel.—30 cents per cubic foot, provided the minimum payment will be \$20 and the maximum payment \$100 for any single development for developing a spring or seep by digging out the source and where practical conveying through a pipe not less than 1 inch in diameter or through a trough to a wooden, metal, or concrete tank or trough. A wet weather spring or seep shall not qualify, nor shall the repairing or enlarging of any spring or seep for which a payment has been made under a previous program be approved for payment. All rock shall be classed for payment as gravel, unless a drill is required to excavate it.

Earthen tanks or reservoirs under practice (g) may supplement the above specifications with respect to tanks or troughs, but no payment will be made for their construction at a developed spring or seep. The source of each spring or seep, including the back-filling of any excavation made for installing perforated tubing or tile, shall be adequately protected from trampling, either by a fence which will turn all classes of livestock or by rock and a substantial covering.

Practice (j) (2)—Excavation in rock.—50 cents per cubic foot, provided the minimum payment will be \$20 and the maximum payment \$100 for any single development.

Specifications for this practice shall be identical with those for practice (j) (1).

RANGE-BUILDING ALLOWANCE

The range-building allowance shall be 3 cents per acre of range land in the ranching unit plus 75 cents times the grazing capacity of the range land. However, the grazing capacity item shall not be calculated on more than one animal unit for each 10 acres of range land in the ranching unit, and the acreage item shall not be calculated on more than 60 acres for each animal unit of grazing capacity established for the ranching unit. The amount computed under this paragraph shall not be less than 10 cents times the number of such acres or 640 acres, whichever is smaller.

CONDITIONS OF PAYMENT

Payments under the 1940 Range Conservation Program shall be made only on those ranches with regard to which the county committee certifies that good range-management practices have been carried out and only for such practices as are needed on the ranch to promote conservation and good range management.

Payment for range-building practices shall not exceed the range-building allowance computed for the ranch and shall be made for any practice only when performed in accordance with approved specifications.

No payment will be made where one-half or more of the total cost of a practice is contributed by a State or Federal agency. If less than one-half of such cost is contributed by a State or Federal agency, payment at one-half the approved rate may be made.

All or any part of the payment for performance of range-building practices may be withheld if the applicant has employed any scheme or device that will deprive another person of a share of the payment to which he would have been entitled had the 1939 leasing arrangement been in effect, or if any practice has been adopted which defeats the purpose of this or any previous range programs, or if the forage, tree growth, or watershed has been injured by overgrazing in 1940 on any range land under the control of the operator.

GENERAL PROVISIONS

Range program provisions similar to those for agricultural conservation program.—Provisions of the range program with respect to claims, assignments, time of filing applications, increase in small payments, \$10,000 limitation, deductions for administrative expenses, appeals, availability of funds, and applicability are similar to such provisions in part I of this handbook.

Establishment of grazing capacities.—The grazing capacity of each ranch for which form WR-415 is executed, which form must be filed in the county office before May 1, 1940, will be determined by a competent range examiner.

ADDITIONAL INFORMATION

Complete information may be obtained from the county office of the county agricultural conservation association regarding payments, appeals, range-building practices, and other details of the program.

N. E. DODD,
Director, Western Division.

